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ABSTRACT

This paper investigates aspects of literacy and numeracy skills in seventeenth and early eighteenth century New England in order to provide a qualitative context for recent quantitative studies of colonial literacy. Sources include colonial legislation on education and apprenticeship, town records, schoolchildren's textbooks and copybooks, as well as newspaper advertisements. The following conclusions are drawn: (1) basic to all literacy/numeracy instruction was the specific teaching of those skills; (2) literacy and numeracy instruction were offered in the order of the "three R's": reading, then writing, then arithmetic--and each skill presupposed the mastery of the preceding one; (3) subjects were gender-specific; (4) economics lay behind the teaching of writing to boys and sewing to girls; (5) numeracy skills were likewise restricted to boys; (6) colonial requirements for literacy/numeracy became more stringent over time; and (7) teaching was gender-determined as well as learning (men taught writing and arithmetic; women taught reading). Three more tentative conclusions are drawn: Many New England towns may have restricted their schools to boys; the expectation that children would enter town schools knowing how to read proved unrealistic; and women had the opportunity to earn money by teaching reading throughout the colonial period. (Author/TE)

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The Three R's: Notes on the Acquisition of Literacy and Numeracy Skills in Seventeenth-Century New England

E. Jennifer Monaghan

Brooklyn College of The City University of New York

Paper presented at the annual meeting
of the American Educational Research Association, New Orleans
April 1984

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ABSTRACT

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Investigates aspects of the acquisition of literacy and numeracy skills in seventeenth and early eighteenth-century New England in order to provide a qualitative context for recent quantitative studies of colonial literacy. The sources used include colonial legislation on education and apprenticeship, town records, schoolchildren's textbooks and copybooks, as well as newspaper advertisements.

The following conclusions are drawn: (1) Basic to all literacy/numeracy instruction was specific teaching of those skills. Increased attention was paid to writing and arithmetic instruction as the century passed. (2) Literacy and numeracy instruction were offered in precisely the order suggested by the conventional interpretation of the "three R's": reading, then writing, then arithmetic, with a considerable time lag between each. Each skill presupposed mastery of the previous one. (3) The subject taught was a function of the gender of the learner: all children were required to learn to read, but writing was legally required only of boys until remarkably late in the colonial era. (4) The reasons for these unequal expectations were economic: writing was a commercial skill oriented to the job-market, while the female equivalent skill was sewing. (5) Numeracy skills were also almost entirely restricted to boys, for the same reasons. (6) Colonial requirements for literacy/numeracy were made more stringent over time. (7) Teaching was gender-determined as well as learning: men taught writing and arithmetic, women taught reading. Three more tentative conclusions are drawn: (8) Many New England towns may have restricted their schools to boys until the end of the

century. (9) The expectation that children would enter the town schools knowing how to read proved unrealistic. Either, therefore, the town master began to teach elementary reading, or the town employed school dames to teach reading. (10) The opportunity for women to earn money by teaching reading was present throughout the colonial period. After the 1680s, however, women began to be part of the town schooling system, as paid teachers.

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Introduction

The purpose of this paper is to provide some qualitative evidence to serve as a context for the quantitative data on colonial literacy that have appeared in the last decade or so.[1] The paper seeks to shed some light on the following topics: the motivation for acquiring literacy/numeracy skills; the order in which they were acquired and the age at which children undertook their study; the way such skills were taught; and the gender restrictions, if any, on skill instruction. It also investigates the characteristics of teachers of separate skills.

In order to lay the groundwork for the discussion at the end of the paper, the following topics are pursued. First, methodologies of reading and writing instruction are surveyed, with a brief look at arithmetic instruction. Then the institutional forms of schooling common to New England townships are reviewed, as are the prerequisites for the various kinds of schooling. The clientele of each genre of school is debated; this in turn leads to a discussion of the gender restrictions involved in the teaching of reading and writing.

Throughout the study, the discussion will center on New England during the seventeenth century. However, examples of schooling will be used from the eighteenth century, particularly up to the 1740s, wherever they seem to illuminate the experiences of the preceding century. In addition, special attention will be paid to two towns, Boston and New Haven, as paradigms of, respectively, a school system at its most specialized and successful, and of one which met with constant difficulties in its attempts to educate its children in the basic skills.

Teaching Reading

The colonial reading curriculum was of course brought over, with so much else, from the mother country. As Lawrence Cremin has pointed out, it followed the outline sketched by the English philosopher John Locke, who in 1693 characterized it as the "ordinary road of the Horn-book, Primer, Psalter, Testament, and Bible." [2]

There is plenty of evidence that the colonists followed this "ordinary road" (of which Locke thought none too highly) in the early days of settlement. Hornbooks, often mentioned cheek by jowl with primers, turn up here and there in the sources over the course of the seventeenth century. Both hornbooks and primers, for instance, were included on an invoice of goods that the commissioners wished the London corporation to send them for John Eliot's praying Indians, in 1655.[3] In 1678, one Charles Lidgett mentions in his accounts that he paid 8 pence "For horning book and pap[r]." [4] Both plain and gilt hornbooks are listed in the book inventories of a Boston bookseller in 1700.[5] But the classic seventeenth-century reference to hornbooks occurs in Judge Samuel Sewall's diary. On April 27, 1691, Sewall recorded that he had sent his little son Joseph, who was not fully three years old, off to school. "This afternoon had Joseph/to school to Capt. Townsend's Mother's, his cousin Jane accompanying him, carried his Horn-book."[6]

In the first half of the eighteenth century, references to hornbooks appear in newspaper advertisements. Andrew Bradford of Philadelphia, for instance, advertised that he had hornbooks for sale in 1727, in the first three months of 1730, and again in August 1734. After he died in 1742, his widow, Cornelia, continued to advertise hornbooks, placing ten separate advertisements in the papers during 1746. Primers, gilt hornbooks and plain hornbooks were all advertised in the Pennsylvania Gazette at the close of 1760. Similar advertisements have been found in South Carolina and Georgia papers.[7]

The hornbook was never really a book. As the English poet

William Cowper put it:

> Neatly secured from being soil'd or torn,
> Beneath a pane of thin translucent horn,
> A book (to please us at a tender age
> 'Tis call'd a book, though but a single page)
> Presents the prayer the Saviour deign'd to teach. [8]

It was a very small paddle of wood, to which the "single page" was attached with a dab of glue. Then a transparent horn sheet was held in place over the page by a rim of thin brass strips. The horn sheet, which of course gave rise to the hornbook's name, protected the page itself from grubby little hands. "Gilt" referred to the quality of the back of the hornbook. While only a few hornbooks have been discovered in America, English examples show both how simple and how elaborate a hornbook could be.[9] There is, interestingly, no evidence that hornbooks were ever manufactured in America. As the continuing advertisements suggest, they were all, apparently, imported into the colonies from England.[10]

It is not the construction, however, of the hornbook, but the contents of its single page, that are of interest. For this one page represents a mini-course in reading instruction. The hornbook's page began with the alphabet, in small and capital letters; then swung into the first four lines of what was called the "syllabarium": ab eb ib ob ub appeared on the left of the page, while ba be bi bo bu appeared on the right. After four lines of this, the invocation follows ("In the name of the Father...") and the Lord's Prayer, which ends with an amen.

The function of the hornbook as an introduction to the art of reading is reviewed by William Hornbye, in his poem Horn-Book,

published in London in 1622. Hornbye discusses the schoolmaster's initial approach to his three or four-year old pupil.

> And, having so the child's affection won,
> (He saith) Sweet Lad, come, and thy Horn-booke con.
> And so the A B C he first is taught;
> From that to spelling he is after brought;
> And, being right instructed for to spell,
> He learns his Sillables and Vowells well...
> The Horn-booke having at his fingers end,
> Vnto the Primer he doth next ascend. [11]

In other words, the child first learned the letters of the alphabet (his A B C); then he learned how to spell out the consonant-vowels of the syllabarium ("A B ab, E B eb"); then he spelled out and read the invocation and Our Father; and finally, he graduated from the hornbook to the primer. He was thus introduced to the alphabet and to the alphabetic (or spelling) method of tackling words, which involved spelling orally, in syllables; and, of course, he took his first steps along the path of Christianity by learning a couple of basic prayers.

Unlike hornbooks, which seem always to have been imported into the colonies, primers, the next step in the reading curriculum, were printed in the colonies from a very early period as well as being imported. The earliest known American primer -- American both in the sense of being designed for an American audience and of being printed on an American press -- was composed in 1669 by John Eliot, famous for his dedicated apostleship to the Algonquian

Indians of Massachusetts. The title of this little book admirably sums up the dual role played by the primer in both reading and religious instruction. It reads: The Indian Primer; OR, The Way of Training up of our Indian Youth in the Good Knowledge of God, in the Knowledge of the Scriptures and in an Ability to Read.[12]

Primers of a more conventional kind than this Algonquian version were certainly imported into the colonies from the first. They must have been a standard item in any village store from the earliest days of settlement. One instance of primers as an item in a store is documented for the colony of New Haven, in 1645 -- only seven years after the colony was founded. A Captain Turner was accused by Mrs. Stolion, before the New Haven Colony Court, of having backed down on a deal in which he had promised to give her two cows in exchange for her six yards of cloth. Not to be outdone, the captain accused Mrs. Stolion in turn of price gouging: he claimed that "she sold primmers at 9^{d} [nine pence] apeece w^{ch} cost but 4^{d} here in New England." [13]

Primers as a genre became a publishing staple of the presses of New England, as they increased in number. The New England Primer, deservedly the most famous of all colonial textbooks, has a publishing history that runs from 1690 (when it was already in its second impression) until well after the close of the colonial period. Its contents, and those of its rival primers, were highly predictable. In essence, it recapitulated the hornbook, except that the syllabarium ran from ab all the way to az before it offered the child lists of words: first monosyllables, then words of increasing length up to heart-stoppers such as a bo mi na ti on on page 9. The rest of the New England Primer -- the alphabetic verses, the prayers, the long poem attributed to John Rogers

and addressed to his children just before he was burned at the stake -- these need not detain us. They all, as did the catechism that was tacked on to the end of the book, involved content, not methodology.[14] In short, this quintessentially Congregationalist text presumed that the child could master reading from a mere nine pages of instruction. The rest of the book put the theory into practice.

From the primer, the child "ascended" to the psalter. While the Bay Psalm book was a straightforward rendering of the Psalms into rather poor verse, there were also psalters printed in the colonies that actually included some reading instruction (which of course, given the alphabetic method, was couched in the language of spelling instruction). The New England Psalter, whose title of course evoked the New England Primer, was one of these. The version published in Philadelphia in 1760, for example, indicated in its lengthy title that it had been "Improved by the addition of a variety of lessons in spelling, accented and divided according to rule. Likewise, rules for reading and particularly of the emphasis belonging to some special word or words in the sentence...The whole being a proper introduction, not only to learning, but to the training of children in the reading of the holy scriptures in particular."[15]

Unlike the primers that poured off colonial presses, neither the New Testament nor the Bible in its entirety was printed in the colonies. Their use as the final destination for the learner, the crown of his or her struggle to learn to read, is well documented. Just one instance in the seventeenth century will suffice.

In 1651, the daughter of a Captain How was brought before the New Haven court and charged with prophane swearing, a stubborn miscarriage toward her mother, and for speaking in a prophane way of the scriptures. According to her mother, she had picked up some of her bad habits at Goodwife Wickams, where she went to school. Two separate witnesses testified to the fact that young How (the court recorder never managed to get her first name) had made remarks about her mother like "a pockes of y^{e} devill what ayles this madd woman," and that they observed her look in a Bible, turn over a leaf, and say that "it was not worth reading." It is not too farfetched to assume that Miss How had reached the stage of reading the Bible at Goodwife Wickams' school.[16]

There is one text that does not appear in John Locke's curriculum of hornbook, primer, psalter, New Testament and Bible -- the spelling book. Spelling books were printed on colonial presses from a very early date. In fact, one of the first pieces to come off Stephen Daye's press in Cambridge, in about 1643, was an unidentified spelling book.[17] But the role of the speller as a type in the seventeenth century is not clear. In the eighteenth century, colonial presses started to publish spelling books in greater numbers: Nathaniel Strongs <u>England's Perfect Schoolmaster</u>, reprinted from its English counterpart in Boston in 1710, gave way to other works, of which by far the most popular, after 1770, was Thomas Dilworth's <u>A New Guide to the English Tongue</u>. (It was Benjamin Franklin who published the first American edition of Dilworth in 1747.)[18] In the seventeenth century, however, it seems that spelling books were designed for young adults, not children.

There are two points to be made about American reading instruction in early colonial times. First, reading instruction was integrally connected with religious instruction. Second, however religious its orientation, reading instruction was also systematic. The New England Primer, for example, did what the hornbook began to do, but better. It proceeded from easy to difficult -- given that the assumption of the time was that short words were easier than long words. Its lists of words to be spelled out and learned were organized alphabetically. The child was given more words, more practice, as well as more Christianity in the form of additional prayers and so forth. When the spelling book began to be used in schools as the key textbook for teaching reading, some time in the second half of the eighteenth century, it, too, proceeded systematically. It covered the same ground as the primer, but gave the child yet more lists of words, and more time to perfect his technique of of spelling them in order to read them. While learning to read was made a little easier by the fact that children were reading texts that were already familiar to them orally, as Cremin reminds us, it is still true that there was a highly standardized way of teaching the skill.[19]

There is a further point to be made. Because of this standardization, it was very easy to teach reading. (It was much harder to learn it, as we shall see.) All that was necessary, from the point of view of the teacher, was the learner, and the textbook. All the teacher had to do was listen to the child spell and read aloud from his or her textbook. As a matter of fact, once the

teacher was sure that the child had mastered the alphabet, it was not even necessary for the former to see the book. Because learning to read was undertaken orally, and the child spelled the syllables and words aloud before pronouncing them, during the initial stages of learning to read, the teacher could -- and no doubt did, in the home setting -- listen to the child and judge if he or she were pronouncing the word correctly simply from hearing the spelling. This advantage of the alphabetic method had been pinpointed very early by the author of a tremendously popular spelling book, Edmund Coote. In the first edition of his The English Schoole-Maister, published in London in 1596, Coote, addressing a hypothetical teacher, wrote, "And thou maiest sit on thy shop-bord, at thy loomes, or at thy needle, and neuer hinder thy worke, to heare thy scholers, after thou hast once made this little booke familiar vnto thee." [20] Because the route of reading instruction was so clearly set out, and so comfortably familiar to all, anyone could follow it -- even a woman. In other words, the easy task of teaching reading could be safely entrusted to the weaker and more simple-minded sex.

All of this makes it much easier to understand how the first law that mentioned education in the Massachusetts Bay Colony, the poor law of 1642, could have issued instructions to the selectmen to enquire into the "calling and employment" of all children, "especially their ability to read & understand the principles of religion & the capitall lawes of this country," [21] without once mentioning schools. For the presumption was that

children, in those early days of settlement, could and should learn to read at home.

It is significant that, on those rare occasions when we know who taught the child to read at home, it is the mother who is singled out. Increase Mather, born in Dorchester, Massachusetts, in 1639, "learned to read of my mother" (whom he described as a "very Holy praying woman").[22] Richard Brown, born in 1675, also had a "pious and prudent" mother, who endeavored to instill into him "the principals of Religion and holiness." After "she had caused me to read well at home, she sent me to school."[23] The more pious the mother, the likelier that she would teach her children to read.

Teaching Writing

In sharp contrast to reading instruction, writing was an art that, from the first, required a trained specialist. The task, therefore, fell to men, not women, in the seventeenth century. When we do hear of writing being taught in the home, as was the case with the Mather family, it is the father who is the instructor. Increase Mather "learned to write of Father, who also instructed me in grammar learning, both in the Latin and the greeke Tongues."[24] His son Cotton in due time encouraged his children to write.[25] But the normal route to teaching writing, outside the home setting, was through apprenticeship.[26]

The mechanics of writing, unlike the supposed simplicity of reading, were elaborate. The state of the art is summarized in an alphabetical poem that dates back to at least 1720 and, given its use of "thou," probably earlier.

11.

All Letters, ev'n at Head and Feet must stand;
Bear lightly on thy Pen, and keep a steady Hand.
Carefully mind to mend in every Line.
Down Strokes make black, and upward Strokes make fine.
Enlarge thy Writing if it be too small.
Full in proportion make thy Letters all.
Game not in School-time, when thou ought'st to write,
Hold in thy Elbow; and sit fair to th' Light.
Join all thy Letters with a fine Hair-stroke,
Keep free from Blots thy Piece and Writing Book.
Learn the Command of Hand by frequent Use:
Much Practice doth to Penmanship conduce.
Never deny the lower Boys Assistance:
Observe from Word to Word an equal Distance.
Provide thyself with all Things necessary.
Quarrel thou not in School tho' others dare thee.
Rule strait thy Lines, be sure to Rule them fine;
Set Stems of Letters fair above the Line.
The Heads above the stem, the Tails below.
Use Pounce to Paper, if the Ink go thorough.
View well thy Piece: compare how much thou'st mended;
Wipe clean thy Pen, when all thy Task is ended.
Young Men your Spelling mind; write each word true
and well;
Zealously strive your Fellows to excel.[27]

As this piece of doggerel reveals, in order to write, the novice had to have a pen, ink, writing book, a rule, and pounce (to blot

the paper with). What the poem does not mention is that the learner also needed a copy -- a model of script that he could copy into his book. It was the master who provided this. The texts to be copied were usually improving in nature.

> Forsake not Vertue, but frequent her wayes –
> Her Rules long practiz'd may exalt thy praise[28]

was one of the pieces of advice proffered by Edward Cocker, the most prolific of seventeenth-century English writing masters.

Unlike the textbooks for reading instruction, which were in the possession of the pupil, or at least the pupil's family, the texts for writing instruction were the prized possessions of the writing master. It was clearly not to the best interests of the profession to encourage the notion that anyone could learn to write from a book, rather than a person. English copybooks, which date from Martin Billingsley's The Pens Excellencie of 1618,[29] were no doubt brought over the high seas by early writing masters.

Nonetheless, there are examples of copybooks in the seventeenth century which point to self-instruction. Lewis Hughes' book, titled Plain and Easy Directions to Faire Writing and published in London around the middle of the century, insisted that the book was "set forth for the benefit of the new planted Vineyards of the Lord Jesus in Virginea, Sommer Islands and New England."[30] The unidentified G.D.'s copybook, Directions for Writing (1656), soothed the writing master's sensibilities by continuing in its title, Set forth for the benefit of poore Schollers, where the Master hath not time to set Copies. The author explained that his little book was "only for Men or Boys to practise at such times as they are at home," when inconveniences such as poor roads or the student's ill health "may happen to keep the School-master and

him a sunder." [31] These early examples presaged a spate of self-instruction books in the following century. Characteristically, Benjamin Franklin would be the first to publish a truly colonial copybook: The American Instructor: or, Young Man's Best Companion, in 1748, [32] which would be popular with young adults.

There was very little temptation for children to instruct themselves in the seventeenth century: the hands were too difficult. The complexity of the scripts that the learner had to master made learning to write a difficult project indeed. True, as time passed, successive generations of children no longer had to produce the secretary hand. This spikey and elaborate, though handsome, gothic script (the written equivalent of the printed English black letter), gradually lost out to its more freeflowing and simpler rival, the italic hand, as the century progressed. After mid-century, the hybrid that arose from the juxtaposition of these two contrasting letter forms came to be the preferred form in colonial America. Named the "new mixed current" or "speedy Italian" form or even "Italienne bastarde," this cursive mixed italic preserved a few curlicues from the gothic script while leaning heavily towards its Italian model. [33]

Even the "bastard Italian," however, was not easy to write well. Quill pens produced thick strokes under pressure when drawn down the page, and thin when drawn up, with less pressure. The ideal mix of broad and slender strokes did not come readily to young hands. As G.D. [illegible] it, admittedly referring to the gothic script, a child needed to be shown "how many strokes do goe to every letter and how to goe over every stroke and letter softly and leasurely with a dry Pen, until his hand hath left shaking..." [34]

Not until the eighteenth century would scholars find some relief from the sheer difficulty of the hand they had to learn. Then the English "round hand," a relatively straightforward script, would supplant all others as a script for business. The round hand was promoted in England by such texts as John Ayres' A Tutor to Penmanship; or, the Writing Master (c. 1698) and the influential George Shelley's Natural Writing in All the Hands, with a Variety of Ornament (1709).[35] This and other books by Shelley, as well as a 1712 edition of George Bickham's Round Text and Round-Hand, were among the books in the personal library of Abiah Holbrook, perhaps the greatest of all Boston's writing masters. Holbrook's library illustrates the persistent flow of information, ideas and books on the art of writing from the Old World to the New.[36]

Teaching Arithmetic

We know less about the teaching of arithmetic in the seventeenth century than about either the teaching of reading or of writing. There is a good reason: it was generally much less taught. There are only nine instances of colonial legislation that include a reference to mathematics, in Clews' Educational Legislation.[37] One of them was promulgated by the Hartford Court, in 1690, which ordered that two free schools were to be set up, one in Hartford and the other in New Haven, which were designed for "all such children as shall come there, after they can first read the psalter, to teach such reading, writing, arithmetic, the Latin and Greek tongues."[38] It was apparently not until the eighteenth century that simple arithmetic was systematically included in the curriculum of the grammar school in New England towns, although it does

appear in a few Latin schools before the turn of the century: in Bingham in 1670, in Swansea's new school in 1673, and in the Salem Latin School in 1699.[39]

There was no pressure on Latin grammar schools to incorporate arithmetic into their curriculum because the colonial colleges were singularly slow in insisting on a knowledge of mathematics as an entrance requirement. Yale College did not make it an admission requirement until 1745, while Harvard ignored it as a prerequisite until after the American Revolution. In fact, arithmetic was taught at college: copies of Edward Cocker's Arithmetick and James Hodder's Arithmetick have been preserved in Yale, in editions of 1688 and 1685 respectively, with markings that reveal student use.[40]

The relatively late inclusion of arithmetic into the curriculum of the town grammar school may, however, be somewhat misleading. Because "written arithmetic was the tool of commerce and bookkeeping,"[41] the subject was relevant to the world of work, not of academe or the ministry. It is to colonial indentures that we should look to see how early in the colonial experience the three R's began to be linked together, whenever educational provisions were included in apprenticeship indentures. One such case occurred in New Haven in 1660. This was a court case that involved a youth who was being held as a servant without a written indenture. John Tompson Junior, the master, affirmed that there had been a verbal agreement between himself and Samuel Hichcock's father that Samuel was to serve a seven-year apprenticeship, and that John was to teach him "To write, & read, & arethmetick," as well as "to learne him to doe his laboure at sea." Another witness recollected the agreement a little differently: he recalled the educational

provisions as "to read & write & the practicall part of Navigation."[42] Whatever the wording, the implications are clear: Samuel was to be taught enough mathematics to qualify him for a better position on a ship than just a sea hand.

Interestingly, only three years later there was a discussion about the curriculum in the town school, during which it becomes clear that arithmetic has not been included up to this point. Now the subject at least rises to the public consciousness, for "something was spoken about teaching arethmaticke as very necessary in these parts." However, the subject is still not included in the curriculum, and as late as 1674, the job description given to George Pardee, who is to teach a school that is less than a full grammar school, is "to teach youth to read English and y^{e} accidence and any Grammer ruels as farre as he could, and to write." When, three years later, the town is finally prodded by the colony court to set up a long overdue grammar school, arithmetic is still absent from the curriculum.[43]

New Haven, however, may have been a little behind the times: as Walter Small has noted, while arithmetic rarely appears in colonial legislation on schooling, it does turn up in the seventeenth century in records of a town's agreements with its schoolmasters. Dedham, Massachusetts, was surely unusual in asking its schoolmaster in 1653 to teach not only the reading of English, the accidence and writing, but also the "art of Arithmetic and the rules and practice thereof." Similarly, Hampton, New Hampshire, told its schoolmaster in 1649 to "teach to write and read, and cast accounts, if it be desired." Otherwise, the mention of teaching cyphering in the town English school occurs in the last quarter of the century: in 1674 in Plymouth, in 1685 in Haverhill, in 1691 in Newbury,

and in 1696 in Marlboro. In 1699, Sandwich, in what we recognize as the classic formulation of the three R's, required its master to teach "reading, writing and arithmetic." After 1700, arithmetic appeared in the offerings of towns like Muddy River, Newton, Yarmouth and Rumney Marsh.[44]

Even where arithmetic was not offered in the town-supported school, there was often private instruction available. In fact, one of the first teachers we hear of in New Haven is a "Mr Pearc" who in 1644 informed the town elders that he was on hand to "instruckt them [children] in writing & arethmatick." Similarly, six private writing masters have been identified in Boston as offering instruction between 1666 and 1700. We know that at least one of these, William Howard, licensed in 1667, was given permission to "keep a wrighting schoole to teach childeren to writte and keep accounts." It is highly likely that bookkeeping was taught by the others. The village of Sudbury remarked in 1680 on its schooling efforts -- or rather on its lack of them -- that "As for schools, though there be no stated school in this town . . . for teaching to write or to cypher, here is Mr. Thomas Walker and two or three others about the town, that do teach therein, and are ready to teach all others that need, if people will come or send them."[45]

The link between writing and arithmetic is obvious. Together they formed the basis of a successful commercial career. The ambitious writing master would increase his income potential by adding arithmetical skills to his instructional quiver. When the citizens of Boston finally insisted upon a writing school, first discussed in 1682 as a school to teach "Children to write & Cypher within this towne," it was a bestowal of public approval upon an enterprise long conducted privately.[46] Vocational training was at last to be sanctioned by the public purse. It is no surprise to see, in a 1687 indenture made in Ipswich, Massachusetts, the educational provision specifying that Charles Atwood's master was to "teach or cause to be taught his said Apprentice to read and to write the English tongue suficiently and so far in the art of arithmetick as well as to doe the rule of three called the golden rule or rule of proportion."[47] It will probably prove to be the case that, from the 1680s on, the three R's are brought together in a fairly standard way in the educational provisions of male apprentices, as reading, writing and cyphering.

This was made possible by the tremendous increase in textbooks, from the middle of the seventeenth century to the end of the eighteenth, which were oriented to commerce, and which also assumed no prior arithmetical knowledge on the part of the reader.[48] James Hodder's Arithmetick, or that Necessary Art Made Easy, first printed in England in 1661 and subsequently issued on colonial presses, was popular enough; but Edward Cocker's Arithmetick enjoyed 112 printings in the hundred years that followed its first appearance in 1677.[49]

All arithmetical instruction proceeded in remarkably similar

ways. The rule to be memorized was presented, then examples were given. The student was carried through addition, subtraction, multiplication and division to the "golden rule," or "rule of three." This was a rule on proportion, in which the student has to find a fourth number, when provided with three.[50] This was the point at which girls in the eighteenth century would stop, as we know from their copybooks; only boys would proceed on to algebra and geometry.[51] The same was surely true for the seventeenth century, in those rare instances where girls' copybooks have been located.[52]

As Cohen has suggested, the principle tool underlying the teaching and learning of arithmetic was rote memorization. There was no attempt on the part of textbook authors to indicate the logical relationships among the rules. This emphasis upon rote and repetition, rather than reasoning, was of course a feature of both reading and writing instruction, as well.[53] In contrast, however, to reading instruction -- in which writing played no part -- instruction in cyphering presupposed that the learner had already mastered writing. For the mathematical calculations of the learner were all done in writing, in copybooks.

INSTITUTIONAL FORMS

While instruction in the family was a constant from the first, several kinds of institutional forms of education can be distinguished in New England in the seventeenth century. Public forms -- whether partially or fully supported by the town -- were the Latin grammar school, the writing school (as it manifested itself in Boston when the Writing School in Queens Street opened in 1684) and the town school. Of particular interest to us is just what the town school was designed to teach. Private

forms of
education included the dame school and a whole range of schools where entrepreneurs offered instruction in anything from bookkeeping to astronomy. The latter, however, was only in its infancy at the turn of the century: it would be the eighteenth century that would see private instruction burgeon and bloom.[54]

Dame School

private
Of all these schools, the/dame school is the least visible from the point of view of documentation. To begin with, because the dame school was not publicly financed, there was normally no reference to dames in town records. This forms a contrast to the licensing procedures required for men, who, whether public or private, would normally be vetted by the town. We are inclined, therefore, only to hear of dames through the reminiscences of those who attended their schools, the occasional court appearance, or, in the following century, through some affectionate death notice in a newspaper.

The dame school, which of course had an English counterpart, was a school run by a woman in her own home for small children. Both boys and girls attended. The age at which a child began going to school could be as young as two: we know of one two-year old girl who drowned on her way to school, while Joseph Sewall had not turned three when he trotted off to Captain Townsend's mother.[55]

In that dames took care of small children, the function of a dame school was similar to that of today's day care or nursery school. There was, however, one crucial difference. In addition to providing custodial care, dames apparently always offered reading instruction. It was assumed that children could begin

learning to read at a very young age. The theoretical purpose of the dame school, therefore, was to teach children to read. This explains why little Joseph Sewall had his hornbook with him.

John Barnard, who was born in 1681, has provided us with a rare description of learning to read in a dame school. His parents, said Barnard, "took special care to instruct me themselves in the principles of the Christian religion, and kept me close at school to furnish my young mind with the knowledge of letters. By that time I had a little passed my sixth year, I had left my reading-school, in the latter part of which my mistress made me a sort of usher, appointing me to teach some children that were older than myself, as well as smaller ones; and in which time I had read my Bible through thrice." Alarmed by his pallor, his parents then sent him to the country, where he grew "more fleshy and hardy; and that I might not lose my reading, was put to a school-mistress, and returned home in the fall." In his eighth year he was sent to grammar school to the "justly famous" Ezekiel Cheever. [56] The transition from a female school to a male one is similarly recorded by Joseph Green, who was six years younger than John Barnard. He recollected that "when I came to be big enough to go to school I went to y^{e} Dames School, where I was bad enough, but I at length went tc M^{r} Corlets sch[ool]. [57]

If it is fair to extrapolate back a century from an account at the very end of the eighteenth century, we can surmise that the experience of children at a seventeenth-century dame school was not too different from that of Edward Everett, born in 1794 and

sent to school at the age of three:

> When I was three years old, I began to attend a child's school in the immediate neighborhood of my father's house. I recollect distinctly holding to my sister's apron as a protection against the cattle in the road. I also remember the appearance of my primer, from one corner of which the blue paper covering had been torn. . . My patient and faithful instructress taught me to read before I could speak plain; considerately mingling the teacher and the nurse, she kept a pillow and a bit of carpet in the schoolroom where the little heads, throbbing from a premature struggle with the tall double letters and ampersand, with Korah's troops and Vashti's pride, were permitted, nay, encouraged, to go to sleep.[58]

(Koran and Vashti were the key words for K and V in the New England Primer's alphabet verses.) The gentleness of the instruction may have been a late eighteenth-century feature like the schoolroom itself; the other features of this account probably resemble earlier experiences.

Latin Grammar School

As Joseph Green's and John Barnard's experiences suggest, little boys graduated from their dame schools straight to the Latin grammar school, at the age of seven or eight.[59]

Thanks to Middlekauff's study, we know a great deal about the curriculum of the town-supported Latin grammar school of the eighteenth century, and much of this is true for the seventeenth. Cremin has pointed to the entrance requirements of Harvard College

as being a good guide to the curriculum of the grammar school: an ability to read and understand Cicero, Virgil, or "any such ordinary classical authors"; the ability to speak and write Latin; and skill in construing the easier Greek texts such as the New Testament, Isocrates and the minor poets.[60]

It is crystal clear, first, that this Latin grammar school education was aimed at college; and second, that it was restricted to boys. This was true for the eighteenth century, as Middlekauff has demonstrated, and of course was equally true for the seventeenth. The purpose of a grammar school was to prepare youth for "publique service in church & co̅monwealth."[61] Women were denied participation in either. There was clearly, therefore, not the slightest reason for the town to subsidize a grammar school education for girls. The 1684 Regulations of the Hopkins Grammar School are characteristic: "All Girles be excluded as Improper and inconsistent with such in Grammar Schoole as the law injoines and is the Designe of this Settlement."[62] If any girls learned Latin, as did Jonathan Edwards' sisters, it was at home from their father, or from a private instructor.[63]

It should by now be obvious which gender taught the town Latin school: such a school was invariably taught by a master. Boys attended these schools; men taught in them.

Writing School

The same was true for the writing school. According to Nash, both public and private writing schoolmasters generally taught boys only. Both private and publicly supported writing masters, however, did offer writing instruction, on occasion, privately to girls. Where such private instruction was available, therefore -- which of course it was much more likely to be in a thriving commercial

center like Boston -- girls could be taught writing by a professional, for a fee.[64]

Ideally, a grammar school master did not teach writing. English precedents in the early seventeenth century show that boys used to attend their grammar school from seven o'clock in the morning during the summer (eight o'clock in the winter) until eleven, and again from one to five in the afternoon. This left them time for an hour's instruction in a writing school at eleven and again at five o'clock.[65]

It is clear that the luxury of separate instruction in the learned tongues, on the one hand, and in writing, on the other, was not available in two distinct schools in the colonies. In Boston, for example, Daniel Hinchman was hired by the town in 1666 to help out the master of the grammar school: he was employed with a dual function: "to assist Mr Woodmancy in the grammer schoole & to teach Childere to wright."[66] It would not be until 1684 that the grammar school and writing school would be separate institutions in Boston. Middlekauff considers the mix of grammar and writing school to be the characteristic form of eighteenth-century secondary education.[67]

The curriculum of the Boston writing schools is an important clue to the curriculum of non-Latin town schools. In the initial discussions of the town on the subject, two years before the school actually opened, the selectmen were told "to consider of & pvide one or more Free Schooles for the teachinge of Children to write & Cypher within this towne."[68] When the Writing School in Queens Street (as it would be called later) actually opened, however, the notation by the town secretary states that the school was designed "to teach ye Children of the Towne to read and write."[69] Nonetheless,

later evidence strongly suggests that this kind of reading was to be advanced reading, not elementary reading instruction. For in 1741, John Proctor, Master of the North Writing School (which had opened in 1700), was called before the selectmen to answer a complaint that he had turned boys away from his school. The answer he gave, that he had "refus'd none of the Inhabitants Children, but such as could not Read in the Psalter," appeared to be completely satisfactory, as there is no record of any reprimand.[70]

We do have some idea of the kind of reading instruction offered in the writing schools of Boston. Directions given by the town to masters of writing schools, in 1719, when the third and final writing school was about to open, stipulated that in addition to offering morning and evening prayers, and to catechizing children on Saturdays, the masters should have their scholars read, morning and evening, "a Portion of Gods Word." The town also instructed that "proper Seasons be Stated & Sett apart for the Encourageing of good Spelling."[71] In other words, entrance to a Boston writing school presupposed that the boys had reached the stage of reading the psalter or Bible. This should not surprise us, for the normal age of entry was seven -- the same age as that for the grammar school. Boys were supposed to be reading well by that age.

The Town School: The Schoolmaster

The term applied by colonists at the end of the seventeenth century to their Latin grammar schools was "Latin school," while the name they gave to their non-Latin schools was "English school."[72] The definition of these separate kinds of schools is of course as early as 164[illegible], when the famous "Ould Deluder" school law of the Massachusetts Bay Colony required every town of over fifty families

to engage a master to teach "all such children as shall resort to him to write & reade." Townships of over a hundred families were correspondingly obliged to provide a Latin grammar school.[73] Cremin has, therefore, among others, termed the former school a reading and writing school. He suggests that numerous schools in New England were already, by 1650, offering "reading and writing under a master or dame." and that, in the following century, the "English school continued to stress reading, but writing and arithmetic were brought within its purview in the eighteenth century instead of being left, as before, to separate masters."[74]

It is my contention in this paper that the characterization of these elementary schools as "reading" schools, which added writing to their curriculum only in the eighteenth century, is fundamentally mistaken. The evidence suggests that, on the contrary, these early town schools were basically <u>writing</u> schools, which expected only to "perfect" children in their reading, not to teach them the rudiments. If towns did alter the school curriculum as the decades passed, it was in either of two directions: they lowered their expectations and admitted beginning readers, or they began to pay women to teach children to read.

We have already seen how boys were turned away from the North Writing School of Boston in 1741, because they were not able to read advanced texts. This example of a school system which required previous reading skill may, however, perhaps be dismissed as a function of a sophisticated urban environment. It is instructive, therefore, to look at a rather primitive institution, such as New Haven's. Initially a separate

colony, New Haven was not constrained by either Massachusetts' or Connecticut's laws on schooling in 1647 and 1650. Nonetheless, it tried valiantly, with mixed success, to provide schooling for its children.

Settled in the fall of 1638, the new settlement ordered that a free school be set up in March 1641.[75] It is clear that this school was a grammar school, for Ezekiel Cheever was the town's first master. In 1649, however, Cheever had a falling out with the town fathers, and left New Haven for good. In October, 1650, no doubt aware of the Bay Colony's school law, the town debated "whether parrents should not be compelled to put their chilldren to Learning, at least to learne to read English & to wright." They decided that they should provide a school, and hired William Jeanes at an annual salary of £10. The following year, however, Jeanes asked to be released to teach elsewhere, as he had heard that another schoolmaster was coming to town.[76]

Unlike Jeanes, who only received £10 from the town treasury, John Hanford, the new schoolmaster, was to receive from between £30 to £40 annually (Cheever had received £30 in 1645). In addition, he would be provided with food and lodging. His job description was to "perfect male chilldren in y^{e} English, after they can reade in their Testamt or Bible, & to learne them to wright, & so to bring them on to Latin as they are capeable & desire to proceede therein." Only four months later, however, a sour note creeps into the record. The Governor himself felt called upon to inform the court that the schoolmaster was somewhat discouraged, "because he hath so many English scollers, w^{ch} he must learne to spell, w^{ch} was

neuer the Townes mind." The following year, in 1652, Mr. Hanford threw in the towel altogether, claiming ill health. [77]

In November that same year, Mr. Jeanes reappeared, with a suggestion for the town. He said that he would be willing "to teache boyes and girles to rea and wright, if the Towne thought fitt," if another schoolmaster were coming who could teach them Latin. [78] The town purse, however, clearly did not lend itself to such an extravagence as two schoolmasters, and indeed the town remained schoolless until July of 1653, when a Harvard graduate, John Bower, started to teach. Like his predecessor, he too had to cope with woefully underprepared students: "A complainte was made that the schoolemaster is so imployed in teaching chilldren sent to him to Learne their Letters and to spell (w^{ch} is contrary to order) that others for whom the schoole was cheifely intended (as Lattin scholers) are neglected." [79]

In 1656 New Haven passed its Code of laws, which included the requirement that all children and apprentices were to "attain at least so much, as to be able duly to read the Scriptures, and other good and profitable printed Books in the English Tongue," as well as to understand the main principles of the Christian religion. [80] The following year the town required all the villages of the colony to provide a schoolmaster. [81] In 1660, prodded into further action by their minister, John Davenport, the New Haven town fathers added to the Code a requirement that "the sonnes of all the inhabitants within this jurisdiction, shall (vnder y^{e} same penalty) be learned to write a ledgible hand, so soone as they are capable of it." [82]

Clientele of the Town Master's School

Unfortunately, these unusual glimpses into the realities of seventeenth-century schooling raise as many questions as they answer. On the one hand, it seems clear that as soon as New Haven attempted to offer an education that was a cut above basic literacy instruction, it restricted the school to boys and required that the boys enter the school already having learned to read. It is also very plain that these standards of preparation were simply not being met by the children. On the other hand, it is much less clear whether girls were being admitted to the school when it was not attempting to be a secondary school which included Latin in its curriculum. Mr. Jeanes spoke as if he admitted both boys and girls in his earlier stint as teacher, but his statement could also indicate that he was merely open to admitting both. Only when the town decided that all children were to be taught to read (a provision which unquestionably included girls) and that a schoolmaster was to be provided to teach reading, as was voted in 1657, can we be sure that girls were theoretically eligible for the town school. In this connection, it is significant that the writing requirement for boys was not written into law for another three years.

Nonetheless, we cannot on that account assume that all New England town schools were therefore reading schools rather than writing schools which taught advanced reading. The question is an important one, for, as I argue below, girls were expected to learn to read, but not to write. Boys were expected to do both. If, then, the town school was fundamentally a writing school, which presupposed that the child had already learned to read, at least in part, there would have been no obligation to open the

school to girls. If, on the other hand, the town more realistically assumed that both reading and writing would have to be taught in the town school, then we would expect girls to attend.

The question of the clientele of the so-called reading and writing schools is discussed by Cremin only in relation to blacks and Indians. He appears to assume, without directly saying so, that girls were admitted to the town's elementary schools. Axtell does discuss the issue, claiming that although it was never a widespread phenomenon, a number of towns "began to open the doors of their secondary schools [sic] to 'all sexes for reading and writing English, and for cyphering.'" [83]

Walter Small has thrown the most light on this point. In a study of schools of the colonial period, he reports finding, out of almost 200 towns, only seven which definitely admitted girls, and another five which might have. In 1639, before any law on education had been passed by the Bay colony, the township of Dorchester left it "to the discretion of the elders and the seven men, whether maids shall be taught with the boys or not." Small suggests that later evidence proves that girls were not in fact accepted. In the town of Hampton, a New Hampshire settlement that was founded by Puritans, there was an agreement reached with John Legat, in 1649," to teach the children of, or belonging to our town, both male and female (which are capable of learning) to write and read and cast accounts." Dedham, Massachusetts, in 1652 planned to submit a proposition to the townspeople as to whether, in the school it was setting up, and which was to be supported by those who had male children

or servants between the ages of four and fourteen, "whether the town require that girls should be taught in this school or not." No answer was recorded to this query.[84]

In Rehoboth (also in Massachusetts), on the other hand, the selectmen in 1699 agreed with one Robert Dickson that he should keep school for six months, and Dickson undertook "to do his utmost endeavor to teach both sexes of boys and girls to read English and write and cast accounts." Similarly, Deerfield, in northwestern Massachusetts, obviously allowed girls to enter its town school in 1698, because it warned parents that all heads of families with children between the ages of six and ten, whether male or female, should pay a poll tax to the school, "whether they send such childre.. or not." Five years later, the town made a similar motion, but this time changed the age limits. Families of "boys from four to eight, and girls from four to six years old," were to pay their proportion of £10 for the ensuing year, wnether the children went to school or not. Likewise, Meriden, Connecticut, in 1678 charged three pence a week for "all scholars, males or females, from six to sixteen, as long as they shall go to school."[85]

The examples of Deerfield and Meriden, as well as that of frontier settlements such as Hatfield and Northampton, suggest that on the boundaries of settlement, as the seventeenth century drew to a close, the restriction of the master's school to boys was weakening. Indeed, the experience of the frontier settlement of Hatfield may prove, with further research, to be characteristic. From 1695 to 1699 there were no girls in Hatfield's town school; in 1700 there were four girls and 42 boys during the winter term;

nine years later there were 16 girls in a total of 64 school-children.[86]

Nonetheless, there may prove to be yet more towns which stood firm against the admission of girls to the master's school throughout the seventeenth and even the eighteenth century. Farmington, Connecticut, for example, voted in 1687 to devote £20 for a town school, "for the instruction of all such children as shall be sent to it, to learn to read and write the English tongue." Some parents of daughters, it seems, interpreted this too broadly, for the following year the town issued a clarification: "all such children as shall be sent is to be understood only male children that are through their horning book." Moreover, Small found many instances of town schools which, shortly before or even after the American Revolution, were only just beginning to open their doors to girls (for example, Salem, Medford, Haverhill, Gloucester, Hingham and Charlestown). And in these cases, the girls were only being admitted for a couple of hours in the day. As one witness put it, of his school in Lynn, Massachusetts, "In all my school days which ended in 1801, I never saw but three females in public schools, and they were there only in the afternoon to learn to write."[87]

The Town School: The School Dame

The apparent inconsistencies in these various accounts are easier to understand in the context of a new feature in town schooling that we see emerging as the seventeenth century draws to a close: the town's formal sponsorship of women to teach reading. One presumes that private dame-school instruction had continued for decades in New England; after 1670, however, we see towns actively seeking for female teachers to teach reading to small children.

Although the towns' financial support of dames, at the end of the seventeenth century, was meager indeed, this was no different in principle from the funding provided for schoolmasters: in the early days, towns had proved very reluctant to provide the master of the English school with a full salary. He, too, had looked to the parents of the children who attended his school for fees. School dames, it need hardly be said, were paid consistently less (half as much, at the most) than male teachers throughout the colonial period. Their salaries amounted to a few pennies per week per child.

After 1670, there are many references in the town records to school dames who received some kind of financial support from the town. In Massachusetts, Woburn paid ten shillings to two women in 1673, and the same sum to another in 1686. Cambridge reported in 1680 that "For English, our school dame is Goodwife Healy; at present but nine scholars." Two years later, Springfield agreed with Goodwife Mirick that, in order to "encourage her in the good work of training up of children and teaching children to read," she should have three pence per child a week. Newbury, in 1694, actually decided to "erect a little house for the accommodation of a good and sufficient school dame." [88]

After 1700, mention of school dames increases. Small found references to them in records running from 1700 to 1720 for Waterbury and Windsor, Connecticut, and for Weymouth, Lexington, Billerica, Charlestown, Salem and Falmouth, all of Massachusetts. A few of these, as was the case with Charlestown, only involved

the town in paying for poor children who could not otherwise attend school. But from 1730 on, there seems to be a definite shift in the direction of employing women to teach reading on a regular basis, in specific parts of town, with funds allocated for that purpose from the town treasury. Framingham had voted as eady as 1713 to appoint selectmen to "settle school dames in each quarter of the town." But a more generalized trend may perhaps be seen in votes such as that of Worcester, which in 1731 decided that no more than five school dames should be hired "at the charge of the town, for the teaching of small children to read." Two years later, Mendon voted to raise the sum of £30 and to "choose school dames to keep school in the outskirts of the town." North Brookfield, that same year, decided to hire four women for four months. Wendham, the following year, in 1733, made a remarkable arrangement with its schoolmaster whereby he delegated his responsibilities to others: he was to be "allowed to teach little children to read by suitable women, in the several parts of town, that he shall agree with, by the approbation of the selectmen; also to teach to write by another man in another part of town." Manchester, in 1736, voted that half of its school allocation of £50 should "be expended to support four school dames to keep a free school."[89]

It appears, then, that from about 1730 on, towns increasingly supported their own elementary reading schools, which were invariably taught by women. The motives for this arrangement were several. As the towns increased in size, the need for a school within the walking distance of small children increased correspondingly. In addition, a further motivation for this expansion

of the town's schooling efforts is provided by the experience of Marblehead, around the turn of the century. The town's move to employ school dames was prompted by a survey it undertook of the number of boys who could not read, and who could not therefore be admitted to the master's school. They found a total of 122 such boys, the children of parents who could not read themselves.[90]

Only if girls attended the master's school would they have been taught to write at the town's expense, for there is no indication that the school dames were expected to teach writing . Indeed, the case of Deerfield, discussed earlier, is revealing. It will be recalled that in 1703 Deerfield required a fee from families in which the boys ranged from four to eight years, and also from those in which the girls were from four to six years old. This suggests that both boys and girls started to attend school

at the age of four, in order to learn how to read, but that girls left the school when they turned six at the point that writing instruction was begun. The boys stayed in school another two years to learn how to write.

Gender Restrictions on Reading and Writing Instruction

While we may never know how many girls attended town schools in the seventeenth century, we do know the gender expectations for each sex as regards each skill. Over and over again, the picture of separate skill learning as a function of gender emerges from the sources. The minimal requirements for a girl, in her education, were that she should learn to read. The minimal requirements for a boy were that he should be taught both to read and write, and, toward the end of the century, to cypher.

Both sexes had to learn to read. The religious motives for this had been very clearly set out in the 'Ould Deluder" law of Massachusetts in 1647, and in the similar laws passed by other New England jurisdictions in subsequent decades. All children had to be able to read the Bible in order to have access to the Word and to prepare themselves for the possibility of salvation. Moreover, there were political reasons for requiring all townspeople to read: law and order could only prevail if everyone could read the printed laws.

In addition to knowing how to read, boys also had to learn how to write. Whether they were to be ministers or selectmen, or whether they were to undertake commercial pursuits as these expanded in the eighteenth century, writing was a basic employment survival skill. As the township of New Haven put it in 1645, in identifying its reasons for setting up a free school in the town,

the school was to be founded "For the better trayning vpp of youth in this towne, that through Gods blessinge they may be fitted for publique service hereafter, either in church or commonweale."[91] Both church and commonwealth required writing ability, and so the insistence that writing be taught was systematically included in the job descriptions of successive schoolmasters in New Haven and elsewhere.

For girls, on the other hand, writing was a totally irrelevant skill. As they were denied any share in church or commonwealth and rarely had any access to commerce, there was no motivation to provide them with the skill. This fact emerges very clearly from apprenticeship legislation, which may be regarded as the expression of a colony's minimal requirements for its children.

In a study of apprenticeship in seventeenth-century Massachusetts, Walter has identified 267 apprentices, of whom only 32 were definitely girls or young women. For only 31 of all the apprentices was there some kind of educational provision. For boys, the requirement usually followed the lines of being taught to read, write and cypher. James Chichester, for example, when apprenticed at the age of ten, was to be sent to school "until he can write a leagable hand." The 1658 indenture of Hopestill Chandler, who was being apprenticed to a blacksmith, required that he be taught to read the Bible and "to write enough to keep book for his trade." In contrast, the educational provisions made in 1674 for Sarah Joye of Salem were that she be taught her catechism, and "to read English, and the capital laws of the country." In 1656, the master and mistress of another girl apprentice promised to teach her to "reade the English Tongue and to instruct her in the knowledge of God and his wayes." In

not one case was a writing provision found for female apprentices. The stipulation for Apphia Hale, that she was, when apprenticed at the age of seventeen, to learn arithmetic, is an anomaly indeed.[92]

The skill that corresponded, for girls, to what writing was for boys, was the ability to sew. In the study cited above, for example, the boys were apprenticed to learn some 40 different trades. There was no indication, however, that girls were to learn anything else other than housewifery. In fact, only two of the sources specificed even that. Deliverance Stork, bound out as an infant in 1670, was to be taught knitting, spinning and housewifery. Elizabeth Lowle of Salem, according to her mother's will, was to be taught needlework.[93]

Further evidence for sewing as the advanced skill to be acquired by girls in lieu of writing is provided by contemporary records across the Atlantic. Between the ages of five and fifteen, children (either orphaned or needy) were admitted to the Great Yarmouth Children's Hospital, which was, in effect, a charitable workhouse. The master of the hospital was expected to see to the children's education, and kept a register of their educational attainments on entering the hospital and on leaving it. David Cressy has tabulated the notes in the hospital register kept on 132 boys and 85 girls admitted to the hospital between 1698 and 1715. The register, incidentally, confirms Locke's description of the reading curriculum, for each child is categorized as "knows not his/her letters," "cannot read," "in his/her horn book," "in the primer," "reads Testament," or "reads Bible." It also

reveals that some boys were taught to write before they left the hospital. In contrast, "none of the girls reached the stage of writing," according to Cressy. Their "highest achievement was to sew well and to read in the testament or Bible." [94]

The fact that none of the girls was taught to write should, however, surely be interpreted differently. As eleven of the girls were already in either their testament or Bible on entering the hospital, they were as ready as were the 36 boys, similarly prepared, for further instruction. That not even these relatively accomplished readers were taught to write suggests that writing instruction was withheld from them because of their sex, not because they had not "reached the stage of writing." Mary Clark, for instance, had entered the hospital at the age of nine with the comment, "can't read at all." Four years later, she was characterized as reading "in her testament but indifferently and hath gone through her sampler."[95] If girls were to form letters, it would be through the medium of thread, not ink.

The evidence provided by the children's hospital is valuable because it reveals both boys and girls in the same institutional setting. Similarly, a man's instructions for the education of his sons and daughters are significant. In interpreting the provisions of Thomas Thompson's will as they related to education, the Hartford Court in 1656 ruled that "the sons shall have learning to write plainly and read distinctly in the Bible, and the daughters to read and sew sufficient for the making of their ordinary linen." [96] No wonder Anne Bradstreet, whose first book of poetry appeared in London in 1650, felt that she was incurring odium by stepping outside the role prescribed by society for women, in exchanging

the pen for the needle:

> I am obnoxious to each carping tongue
> Who says my hand a needle better fits,
> A poets pen all scorn I should thus wrong,
> For such despite they cast on female wits.[97]

Nor should gender restrictions on whether writing was taught be considered simply a seventeenth-century feature. Apprenticeship indentures for 60 children from Newbury between 1743 and 1760 reveal precisely the same differentiation. Forty-nine boys were apprenticed to learn a range of skills from blacksmithing to making perriwigs. The eleven girls, however, were only to learn "women's work" or "housewifery." All the apprentices were promised reading instruction, but only the boys were to be taught to write and cypher "as far as the Gouldin Rule."[98]

Indeed, the laws of Massachusetts in general bear out this distinction. The Poor Law of 1703, which supplemented the Poor Law of 1692, made it clear that a child could be apprenticed without the consent of either the child or his or her parent, if the parents of such a child were considered unable to maintain it. Provision was nowmade to ensure that children so apprenticed should be educated by stipulating that the masters should provide "for the instructing of children so bound out, to read and write, if they be capable." As both boys and girls could be apprenticed (boys until the age of 21, girls until 18 or their marriage, precisely the age/ as that in the first version of this law in 1642), clearly both sexes were to be taught reading and writing. However, it turns out that the court had not intended this. In 1710, an amendment was passed that altered the order to: "males to read

and write, females to read." The act was repeated once a decade until 1741, when the requirement of "cyphering" was added to the regulations for males. Finally, in 1771, the legislation was changed once again, and the law for children apprenticed under the Poor Laws now stipulated, "males, reading, writing, cyphering; females, reading, writing."[99] In other words, it was not until 1771 that Massachusetts considered the ability to write to be an essential minimal educational necessity for girls. This is particularly significant because the whole purpose of apprenticing these children was to provide them with a skill with which they could eventually support themselves, and not be a burden on the town like their indigent parents. Boys needed to be able to write; girls did not.

As the modern reader may be skeptical that reading and writing could be taught with such complete separation, it is worth looking at a few cases which illustrate the potentially total divorce between learning to read and learning to write. In 1660, John Tompson, master of our New Haven apprentice who was supposed to have been taught the art of navigation, was asked by the court about his apprentice's education. He replied that "he could read pretty well, & y^{t} he was now learning to write."[100] Two years later, William Potter, who was accused of (and subsequently hung for) the crime of bestiality, was asked by the New Haven colony court if he had been educated. "He answered, well, & was taught to reade."[101] Had he also been taught to write, he would undoubtedly have said so. Precisely a century later, Samuel Giles of New York City advertised instruction in writing and arithmetic in his evening school in the fall of 1762. "N.B. It is evident from long Experience, that the teaching of small Children the first Rudiments is of

ill Consequences in such a School (by taking up too much of the Teacher's Time). It is therefore proposed that for the Future, no Children will be taken but such as have already been taught to Read, and are fit for Writing." [102] Finally, we need only refer to the advertisement that appeared in a Boston newspaper in 1755. In it, the advertiser promised to teach "persons of both sexes from twelve to fifty years of age, who never wrote before, to write a good hand in five weeks, at one hour per day, at his house in Long Lane." [103]

Conclusion

Before we draw the conclusions from this study, a preliminary comment is in order. The word "children," as it was used in both the seventeenth and eighteenth centuries, did not necessarily mean both boys and girls, as we understand the word today. In colonial times, and never more so than in the seventeenth century, the entire society was oriented toward males. There was a strict separation of roles in the home and workplace by gender, and it was the males who held the positions of responsibility and power. [104] Male children, therefore, were the prime targets of any town's educational efforts. As a result of this bias, the word "children" meant, in effect, male children, even though it always retained its broader meaning of children of both sexes. In discussions of Boston schools, for example, the town records invariably refer to their students as "children" (or "youth.") Yet free schooling in the Boston system was restricted exclusively to males until 1789. We have seen the ambiguity that this dual interpretation of the word engendered, in a number of cases.[105]

This point -- that when colonials, or, for that matter, their English forebears, spoke of "children," they in fact meant "boys" -- is reinforced when we look at the pronouns used in texts, in those cases where writers have committed themselves to a gender. Invariably, the pronoun is masculine, when the gender of the child is revealed.[106] We should be on our guard, therefore, against using the mere presence of the word "children" as any basis for assuming that girls were included.

Here, then, are the conclusions that can be drawn from this study of the acquisition of literacy and numeracy skills in seventeenth-century New England.

(1) Basic to all literacy/numeracy instruction was specific teaching of those skills. Increased attention was paid to writing and arithmetic instruction, in particular, as the century passed, to judge from the increase in textbooks devoted to those areas.

(2) Literacy and numeracy instruction were offered in precisely the order suggested by the conventional interpretation of the "three R's": reading, then writing, then arithmetic, with a considerable time lag between each. Each skill presupposed mastery of the previous one.

(3) The subject taught was a function of the gender of the learner: all children were required to learn to read, but writing was legally required only of boys until remarkably late in the colonial era.

(4) The reasons for these unequal expectations were economic: religious motives, coupled with social ones, guaranteed that girls should be required to learn to read; but writing was a commercial skill oriented to the job-market, while the female equivalent skill was sewing.

(5) Numeracy skills were likewise almost entirely restricted to boys, for the same reasons.

(6) Colonial requirements for literacy/numeracy were made more stringent over time.

(7) Teaching was gender-determined as well as learning: men taught writing and arithmetic, women taught reading.

Some more tentative conclusions may also be drawn:

(8) Many New England towns restricted the schools "kept" by their schoolmasters, even when these were English schools, to boys. A change seems to have occurred, however, in the 1680s or thereabouts: girls began entering the town English schools. Latin schools, however, continued to be restricted to males.

(9) It proved to be unrealistic to expect that children would enter the town schools already knowing how to read. Town schools appear to have taken two routes, therefore: either the schoolmaster lowered his expectations and included the teaching of elementary reading in his curriculum; or the town turned to school dames, and paid them to teach children to read. At first, in the 1680s or so, this was done on a relatively casual basis. After the 1730s, however, we can detect a trend: towns begin to employ women in set places for specific periods of time. This arrangement prefigured the schooling system prevalent around the time of the American Revolution, in which a woman taught reading to small children during the four summer months, and was replaced in the school by a male teacher for older children during the winter months.

(10) The opportunity for women to earn some money independently by teaching reading was present throughout the colonial period. After the 1680s, however, women began to be part of the town schooling system.

Implications of the Study

The most important implication to be drawn from this study is that, if these conclusions are valid, they both explain the discrepancy between male and female signing that is such a consistent feature of colonial literacy studies, and also force us to reexamine the meaning of the signature as a measure of literacy. A signature obviously has different implications dependent on the sex of the signer. A woman in the seventeenth century cannot be judged to have been illiterate, in the sense of unable to read, simply because she could not write her name. Conversely, women who did sign their names to documents must have been the beneficiaries of a private education.

Suggestions for Further Research

The following hypotheses are worthy of testing:

(1) that there was an inverse correlation between the sophistication/specialization of a town's school, and the admission to that school of girls. Boston is a prime example of a highly specialized school system that excluded girls until after the American Revolution. The more primitive the school, such as that in a small settlement on a frontier, the more likely it would be to admit girls, as did Hatfield.

(2) that once girls were admitted to a town schoolmaster's school, the school remained open to girls thereafter.

(3) that school dames, both private and public, teaching both small girls and boys and, in addition, girls over the age of six or seven, will prove to be more numerous than we have supposed. Their role in education will prove to have been consistently undervalued and will present yet another example of the uneven treatment of the part played by women in education in this country.[107]

NOTES

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3. David Pulsifer, ed., Records of the Colony of New Plymouth in New England. Acts of the Commissioners of the United Colonies of New England. Vol 2. 1653-1679 (Boston: William White, 1859), p. 139.
4. George A. Plimpton, The Hornbook and Its Use in America (Worcester, Mass.: American Antiquarian Society, 1916).
5. Worthington C. Ford, The Boston Book Market, 1679-1700 (New York: Burt Franklin, 1972), pp. 177-78.
6. Quoted in Andrew W. Tuer, History of the Horn Book (London, 1896; rpt. New York, Arno Press, 1979), p. 133.
7. Plimpton, The Hornbook and Its Use in America
8. Quoted in Tuer, History of the Horn Book, pp. 201-202.
9. Tuer, History of the Horn Book, passim.
10. Nila Banton Smith, American Reading Instruction (1934; rpt. Newark, De: International Reading Association, 1965), p.15.
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12. John Eliot, The Indian Primer...(Cambridge, Mass.: [Marmaduke Johnson], 1669).

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14. Paul L. Ford, The New-England Primer: A History of Its Origin and Development with a Reprint of the Unique Copy of the Earliest Known Edition (New York: Dodd, Mead, 1897). For primers other than the New England Primer, see Charles F. Heartman, American Primers, Indian Primers, Royal Primers, and Thirty-Seven Other Types of Non-New-England Primers Issued Prior to 1830 (Highland Park, N.J.: H.B. Weiss, 1935).

15. Quoted in Smith, American Reading Instruction, pp. 17-18.

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17. Robert F. Roden, The Cambridge Press, 1638-1692: A History of the First Printing Press Established in English America, Together With a Bibliographical List of the Issues of the Press (New York: Dodd, Mead, 1905), p.36.

18. Nathaniel Strong, England's Perfect Schoolmaster, or, Directions for Spelling, Reading... (Boston: B. Green, 1710); Thomas Dilworth, A New Guide to the English Tongue (Philadelphia: B. Franklin, 1747); in Charles Evans, American Bibliography, Vol 1, Title 1487 (Chicago: privately printed, 1903) and Roger P. Bristol, Supplement to Charles Evans' American Bibliography (Charlottesville: Bibliographical Society of America, 1970), Title B1343.

19. Cremin, American Education: The Colonial Experience, pp. 129-30.

20. William P. Hart, "The English Schoole-Maister by Edmund Coote: An Edition of the Text with Critical Notes and Introductions," Diss. University of Michigan, 1963, p. 129.

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23. Quoted in James Axtell, The School upon a Hill (New York: Norton, 1976), pp. 174-5.
24. Hall, Autobiography of Increase Mather, p.278.
25. Elizabeth Bancroft Schlesinger, "Cotton Mather and His Children," William and Mary Quarterly, 3rd. series, 10 (1953), 186-7.
26. Ray Nash, American Writing Masters and Copybooks p.13.
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29. Joyce I. Whalley, The Pen's Excellencie: A Pictorial History of Western Calligraphy (New York: Taplinger, 1982), p. 216.
30. Nash, American Writing Masters and Copybooks, p.21.
31. Ibid., pp. 21-22.
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34. Ibid., p. 22.
35. Whalley, The Pen's Excellencie, pp. 237, 250.
36. Nash, American Writing Masters and Copybooks, pp. 18-19.
37. Herbert Kimmel, "The Status of Mathematics and Mathematical Instruction during the Colonial Period," School and Society

9 (1919): 199; Elsie W. Clews, Educational Legislation and Administration of the Colonial Governments (New York: Macmillan, 1899)

38. Quoted in Kimmel, "The Status of Mathematics," p.199.

39. Robert Middlekauff, Ancients and Axioms: Secondary Education in Eighteenth-Century New England (New Haven: Yale University Press, 1963), pp.13, 92-3; Walter H. Small, "Arithmetic in Early New England," Education 21 (1901), 162.

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41. Patricia Cline Cohen, A Calculating People: The Spread of Numeracy in Early America (Chicago: University of Chicago Press, 1982), p.140.

42. Dexter, New Haven Town Records, 1649-1662, p.437.

43. Franklin B. Dexter, Ancient Town Records, Vol. II, New Haven Town Records, 1662-1684 (New Haven: New Haven Colony Historical Society, 1919), pp.49, 332, 365.

44. Small, "Arithmetic in Early New England," pp. 162-63.

45. Hoadly, Records of the Colony and Plantations of New Haven, from 1638 to 1649, p.156; Nash, American Writing Masters and Copybooks, pp.7-8; Robert F. Seybolt, "Schoolmasters of Colonial Boston," Publications of the Colonial Society of Massachusetts, 27 (1928):136; Boston Registry, A Report of the Record Commissioners of the City of Boston, Containing the Boston Records from 1660 to 1701 (Boston: Rockwell and Churchill, 1881): 36; Small, "Arithmetic in Early New England," pp.162-63.

46. Boston Town Records, 1660 to 1701, p.158.

47. Judith Walter, "Apprenticeship Education and Family Structure in Seventeenth Century Massachusetts Bay," M.A. thesis, Bryn Mawr, 1971, p.30.

48. Cohen, A Calculating People, p. 24.

49. Ibid.

50. Ibid., p.26.

51. Ibid., p.140; Middlekauff, Ancients and Axioms, p.105.

52. Kimmel cites, without identifying its location, a writing and "arithmetical" book by Mary Atkinson, "Scholler to ... Elizabeth Bean," (1689) in "The Status of Mathematics," p.202.

53. Cohen, A Calculating People, pp.25, 26 (seventeenth century); p.121 (eighteenth century). For a discussion of the role of memorization in colonial education, see Axtell, The School Upon a Hill, p.176.

54. Middlekauff, Ancients and Axioms, pp.63-74.

55. Axtell, The School Upon a Hill, p.176.

56. "Autobiography of the Rev. John Barnard," Collections of the Massachusetts Historical Society, 3rd. ser., 5 (1836), 178.

57. "The Commonplace Book of Joseph Green," Publications of the Colonial Society of Massachusetts, 34 (1943), 236.

58. Quoted in Walter H. Small, Early New England Schools (Boston: Ginn, 1914), p.184.

59. Middlekauff, Ancients and Axioms, p.13, identifies the age as "about seven years old."

60. Cremin, American Education: The Colonial Experience, p.185.

61. Charles J. Hoadly, ed., Records of the Colony or Jurisdiction of New Haven, from May, 1653, to the Union, Together With the New Haven Code of 1656 (Hartford: Case, Lockwood, 1858), p.301.

62. Quoted in Axtell, The School Upon a Hill, p.176.

63. Alice Morse Earle, Child Life In Colonial Days (New York: Macmillan, 1899), p.93. Earle quotes from a 1711 letter home written by Jonathon Edwards' father.

64. Peter Burr's accounts in the Massachusetts Historical Society show that he gave private instruction to girls; Nash, American Writing Masters and Copybooks, p.8n. Burr was teaching writing in 1694; Robert F. Seybolt, "Schoolmasters of Colonial Boston," Publications of the Colonial Society of Massachusetts 27 (1928): 138.

65. Charles Hoole, A New Discovery of the Old Art of Teaching School (London, 1660; rpt. Syracuse: C.W. Bardeen, 1912), pp.257-58; Nash, American Writing Masters and Copybooks, p.10.

66. A Report of the Record Commissioners of the City of Boston, Containing the Boston Records from 1660 to 1701 (Boston: Rockwell and Churchill, 1881), p.30. (This will be cited as Boston Records.)

67. Middlekauff, Ancients and Axioms, p.15.

68. Boston Records, 1660 to 1701, p.158.

69. Ibid., p.171.

70. Robert F. Seybolt, The Public Schools of Colonial Boston (Cambridge, Mass.: Harvard University Press, 1935), p.67.

71. Ibid.

72. The terms "Lattin schoole" and "Englis schoole" appear in 1677 in Dexter, New Haven Town Records, 1662-1684, p.364.

73. Nathaniel B. Shurtleff, ed., Records of the Governor and Company of the Massachusetts Bay in New England (Boston: William White, 1853-1854), 2:203.

74. Cremin, American Education: The Colonial Experience, pp.182, 500.

75. Hoadly, Records of the Colony and Plantations of New Haven, from 1638 to 1649, p.62.

76. For Cheever, see Edward E. Atwater, History of the Colony of New Haven, to Its Absorption into Connecticut (New Haven: for the author, 1881), p.121. Jeanes is identified as William Jeanes by Atwater, ibid., p.68; he appears in the records as Janes. Dexter, New Haven Town Records, 1649-1662. pp.48, 74, 93.

77. Dexter, New Haven Town Records, 1649-1662, pp. 97, 111-12, 130. Jeanes' salary was finally agreed upon as /20 (ibid., p.99). The final job description stipulated that he should teach the "chilldren of this Towne" rather than "male chilldren" (p.100). See my discussion on the meaning of the term "children," below. Ezekiel Cheever's salary was mentioned in Hoadly, Records of the Colony and Plantations of New Haven, from 1638 to 1649, p.210.

78. Dexter, New Haven Town Records, 1649-1662, p.153.

79. Ibid., pp.181, 206-7.

80. Hoadly, Records of the Colony or Jurisdiction of New Haven, from May, 1653, p.583.

81. Ibid., p.220.

82. Ibid., p.376.

83. Axtell, The School Upon a Hill, p.178.

84. Walter H. Small, "Girls in Colonial Schools," Education 22 (1902): 532. Small used primary sources such as town documents for his study, but does not document his quotations.

85. Ibid., pp. 532-33, 534.

86. Ibid., p.533.

87. Ibid., pp.533-34, 534-37, 534.

88. Walter H. Small, Early New England Schools (Boston: Ginn, 1914), pp. 168, 165, 166.

89. Ibid., pp. 165-170, 177-80.

90. Ibid., p.167.

91. Hoadly, Records of the Colony and Plantations of New Haven, 1638 to 1649, p.210.

92. Walter, "Apprenticeship Education," pp.42-43.

93. Ibid., p. 36.

94. David Cressy, Literacy and the Social Order: Reading and Writing in Tudor and Stuart England (Cambridge: Cambridge University Press), pp.30-34.

95. Ibid., p.34.

96. Small, "Girls in Colonial Schools," p.534. The same court in 1655 ordered the administrators of Thomas Gridley's estate to educate his children, "learning the sons to read and write, and the daughters to read and sew well" (ibid).

97. Quoted in Thomas Woody, A History of Women's Education in the United States, Vol. 1 (1929; rpt. New York: Octagon Books, 1966), p.132.

98. Laurel Thatcher Ulrich, Good Wives: Image and Reality in the Lives of Women in Northern New England, 1650-1750 (New York: Alfred A. Knopf, 1982), pp.43-44.

99. Robert F. Seybolt, Apprenticeship and Apprenticeship Education in Colonial New England and New York (New York: Teachers College, Columbia University, 1917), pp.46-47.

100. Dexter, New Haven Town Records, 1649-1662, p.438.

101. Hoadly, Records of the Colony or Jurisdiction of New Haven, from May 1653, to the Union, p.443.

102. Robert F. Seybolt, The Evening School in Colonial America (Urbana: University of Illinois, 1925), p.23.

103. Quoted in Small, Early New England Schools, p.317.

104. Lyle Koehler, A Search for Power: The "Weaker Sex" in Seventeenth-Century New England (Urbana: University of Illinois Press, 1980).

105. See above, notes 77, 87 (Farmington), 99.

106. See above, notes 11, 27, 31, 34.

107. Joan N. Burstyn, "Women in the History of Education," paper presented at the annual meeting of the American Educational Research Association, Montreal, April 1983. We might never, for example, have supposed that there was a school dame teaching reading to teenaged girls, in New Haven in 1651, had not the student been brought to court (note 16).

Afterword

Although this study has been restricted to education in seventeenth-century New England, there is no reason to suppose that the conclusions drawn here are very different from those that will be drawn for other parts of the country -- other, perhaps, than the south. A poem penned by a judge in Philadelphia in 1691 shows that New England was not unique in expecting reading to be mastered by the child before writing, nor in assigning the two arts to different sexes for instruction:

> Here are schools of divers sorts,
> To which our youth daily resorts,
> Good women, who do very well
> Bring little ones to read and spell,
> Which fits them for writing, and then,
> Here's men to bring them to their pen,
> And to instruct and make them quick
> In all sorts of Arithmetick.[108]

108. Quoted in Carl Bridenbaugh, Cities in the Wilderness, pp.283-84.